

Noxious Weed Alert

Yellow starthistle

Centaurea solstitialis

Yellow starthistle is continuing its threat to establish in Montana. It is currently a Category 3 noxious weed recently found and eradicated as individual plants in the following Montana counties: Carbon, Flathead, Gallatin, Lake, Ravalli, and Sweet Grass. During 2001, 31 plants were found in a Treasure County alfalfa pasture; it is unknown where the seeds came from or how they arrived at this site.

Yellow starthistle is a winter annual forb with yellow flower heads, located singly at the ends of branches. Sharp, straw-colored thorns that are almost an inch long distinguish flower heads (Figure 1). Mature plants are 2 - 3 feet tall and have rigid, branching, winged stems that are covered with cottony hairs.



Figure 1. Sharp spines are found on flower heads (c) BMR/TNC

Seedlings usually emerge in the fall, form rosettes (Figure 2), and begin growing a taproot. Root growth continues throughout the winter. Yellow starthistle bolts in late spring and flowers June through August. It reproduces entirely by seed with plants usually producing 700 - 1,000 seeds per plant, but vigorous plants may produce up to 170,000 seeds per plant with seeds remaining viable for several years.

Yellow starthistle invades rangelands, pastures, roadsides, cropland, and wastelands. It is intolerant of shade and requires light on the soil surface for winter rosette and taproot development. It is capable of establishing on deep, well-drained soils as well as on shallow, rocky soils that receives from 10 - 40 inches of annual precipitation. It favors disturbed sites such as roadsides, ditches, orchards, and

overgrazed rangeland and pasture. However, starthistle will invade undisturbed grassland communities where site conditions are ideal.



Figure 2. Rosettes form in the fall (c) JMR/TNC

Yellow starthistle causes a neurological disorder called chewing disease in horses that eat this weed. Starthistle forms dense infestations, dramatically reducing rangeland diversity and forage production for livestock and wildlife.

Yellow starthistle is a priority for immediate eradication when found. Herbicides are the recommended method and are most effective when applied from the seedling to the early bud stages. Picloram at 0.25 lb, dicamba, or 2,4-D at 1 lb ai/acre are the most commonly used herbicides. Hand pulling can be used to remove small patches of yellow starthistle if follow-up management is implemented to ensure any overlooked plants are removed prior to seed production.

If plants are allowed to produce seed, the resulting seed bank in the soil combined with a long seed life make this plant extremely difficult to control. Prevent establishment by using only starthistle-free seed mixes and forage. Frequently monitor to implement early detection and eradication strategies. Encourage desired vegetation growth to provide resource competition, focusing on promoting healthy native plant communities.

This weed alert is provided by Montana State University - Bozeman. Contact your local county agent or weed district supervisor for more information or to report a yellow starthistle sighting.